

ABSTRACT

Ultrasonic transducers having a reduced size in comparison with prior art ultrasonic transducers and including a thermally-conductive body, a flexible circuit bent at least partially around the body, an acoustic assembly arranged on the flexible circuit and electronic components for controlling the acoustic assembly to transmit and receive ultrasonic waves. Signal transmission lines, such as coax wires, are coupled to the flexible circuit such that the electronic components, the acoustic assembly and the signal transmission lines are connected in a circuit defined in part by the flexible circuit. By bending the flexible circuit with the acoustic assembly, and optionally the electronic components, arranged thereon about the body, they are positioned in a vertical configuration which allows for a compact transducer which has a small, even miniature size in comparison to prior art ultrasonic transducers.